ANNUAL
REPORT
MARCH 31
1986

Alberta
ENERGY

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Alberta
ENERGY

Office of the Minister

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January 5, 1987

The Honorable Helen Hunley
Lieutenant Governor of the Province of Alberta

Your Honor:

I have the honor to submit the Annual Report of the Department of Energy for the fiscal year ended March 31, 1986.

Respectfully submitted,

Neil Webber

Neil Webber
Minister of Energy

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Minister's Message

Viewed in hindsight the 1985/86 fiscal year was noteworthy for the Alberta energy industry and the Department of Energy for several reasons. First, there were major changes in policy with respect to crude oil pricing and marketing, natural gas pricing and marketing and the fiscal regime under which the industry operates. The direction for these changes was set in the Western Energy Accord concluded between the federal government and the producing provinces at the end of March 1985, but the specific changes were announced or implemented during the year.

On June 1, 1985, after 12 years of government regulation, crude oil was deregulated. Since that date, the price of oil has been set through buyer/seller negotiations. Concurrent with these changes, the Alberta Petroleum Marketing Commission was charged with marketing the Crown's royalty share of crude oil, and acting as an agent to sell other producers' volumes.

Also in June the Government of Alberta, after an extensive review of its incentives programs, announced significant changes in royalty rates and incentives. It announced a phased-in reduction of marginal royalty rates from 45 to 40 per cent for old oil and gas, and from 35 to 30 per cent for new oil and gas. In addition, it announced an enrichment of the Alberta Royalty Tax Credit to 75 per cent of royalties payable to a maximum of $3 million. With respect to incentives, the government announced that it would replace activity-based incentives with success-oriented ones. This led to the elimination of the Exploratory Drilling Incentives System (EDIS), the Geophysical Incentive System (GIS), and the Alberta Petroleum Incentives Program (APIP), and their replacement with royalty holidays for new oil and gas wells.

At the end of October 1985 a federal-provincial agreement was concluded setting the process and agenda for deregulating the pricing and marketing of natural gas sold within Alberta. That agreement established a deadline of Nov. 1, 1986, for deregulation. This deadline was reached when, through an exchange of letters between myself and the federal Minister of Energy, the terms of deregulation were announced, and a process for resolving outstanding issues was outlined.

The net effect of these changes was to dismantle the National Energy Program, improve the fiscal climate for the industry and restore confidence and initiative to a sector which had been restricted through excessive federal regulation.

The changes in policy had a significant impact on the level of industry activity which is the second factor making the year noteworthy. Industry activity increased sharply over the previous year, and several indices suggest it was a banner year. Over 7 800 wells were completed, the highest number in any one year, while land sales raised $722 million, the third highest total on record. Crude oil production decreased slightly, but shut-in volumes were minimal throughout the year. Despite increased competition from alternative fuels natural gas sales increased. Sales within the Canadian market remained firm, while they increased by 25 per cent in the U.S. market, thus offsetting the price declines in that market.

Alberta continued to be Canada's largest coal producer and remained active in both domestic and export markets. Although coal markets remained competitive during the year, Alberta producers completed new sales to central Canada's steel sector for the first time since 1977. The government has worked to increase the sale of Alberta coal in Ontario through joint efforts with the Government of Ontario to identify potential benefits of Alberta coal and through the efforts of the recently appointed Coal Development Advisor. The potential for increased domestic use and the long-term potential for sales to Pacific Rim markets hold promise for future coal development.

During the last quarter of the fiscal year the most rapid decline in oil prices experienced in the modern era took place. This led to significant problems for the industry in 1986 and further adjustments in government fiscal regimes which will be the focus of the 1986-87 report.

Overall, the fiscal year can be

described as a successful threshold year. Substantial co-operation between government and industry and between governments brought about the changes. I would like to recognize this co-operation and thank the staff of the department for its dedication and hard work.

The Department

Since 1930 the Government of Alberta has been responsible for the development of the province's natural resources. Constitutional amendments adopted in 1982 reaffirmed this responsibility and clarified the province's ownership and jurisdiction over renewable and non-renewable natural resources.

The mandate of Alberta Energy is to put in place policies that promote effective management of the province's energy resources while collecting a fair share of resource revenues for the province.

Alberta Energy became a separate department early in 1986 when the renewable resources section of Alberta Energy and Natural Resources became the new department of Forestry, Lands and Wildlife.

In carrying out its mandate, Alberta Energy administers several acts governing the development of provincial energy resources, including:

- Mines and Minerals Act
- Mineral Titles Redemption Act
- Freehold Mineral Rights Tax Act
- Petroleum Incentives Program Act

Organization

The department is organized into two sections: Energy Resources and Finance and Administration (Figure 1).

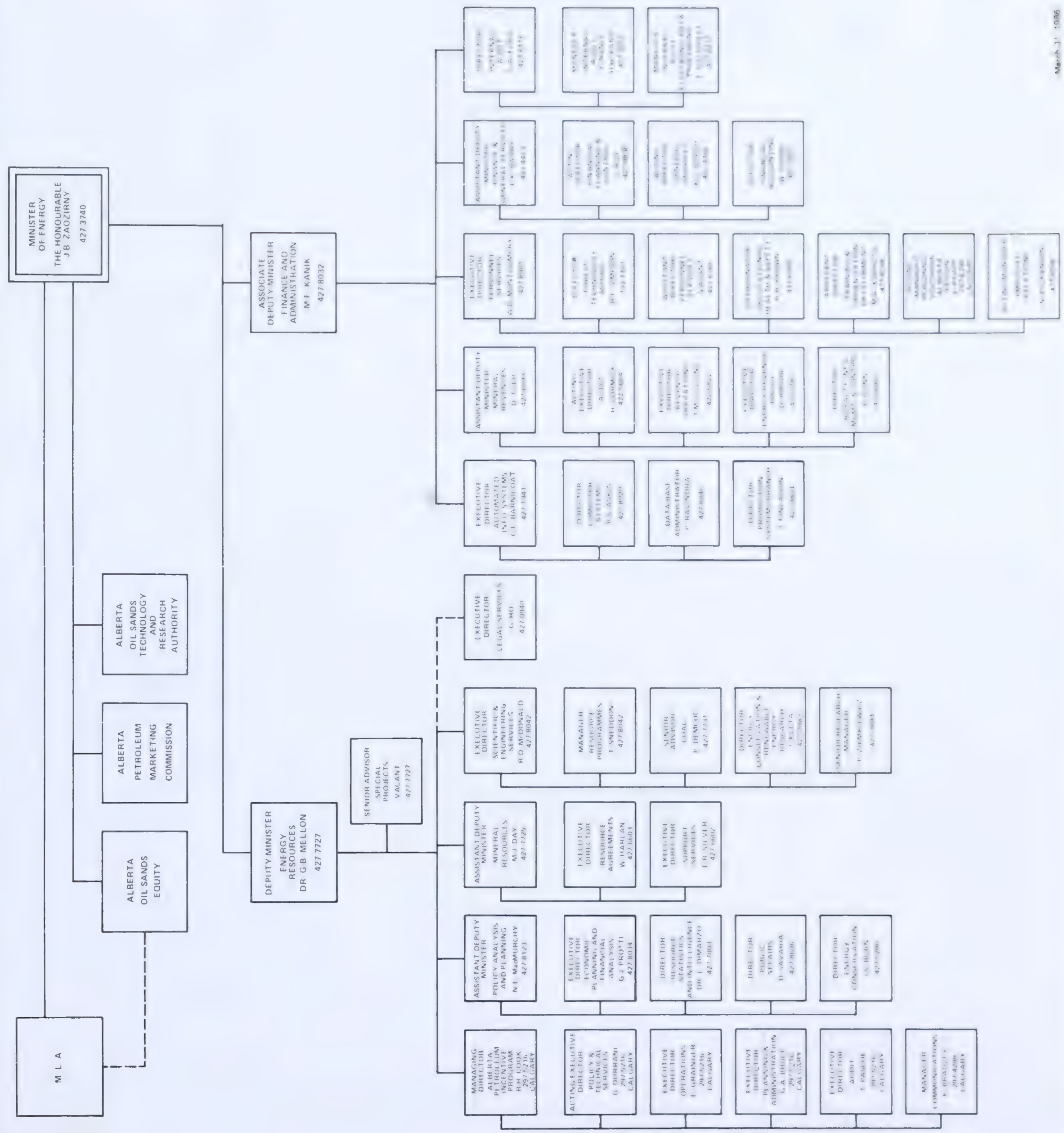
Energy Resources has three divisions: Policy Analysis and Planning, Mineral Resources and Scientific and Engineering Services. Also reporting to Energy Resources is the Alberta Petroleum Incentives Program and the Legal Services Division, which provides legal support to Energy and the Department of Forestry, Lands and Wildlife.

There are five divisions in Finance and Administration: Mineral Revenues, Finance and General Services, Automated Information Systems, Personnel Services and Internal Audit. The Finance and Administration sector also provides support services to the Department of Forestry, Lands and Wildlife.

Other Reporting Entities

Alberta Oil Sands Equity, Alberta Oil Sands Technology and Research Authority and the Alberta Petroleum Marketing Commission report directly to the minister. The activities of Alberta Oil Sands Equity are covered in this report while the other two entities have their own reports.

Figure 1 - Organization Chart



Overview of Energy Developments

Figure 2 - Energy Activity in Alberta

	1984/85	1985/86	% Change
Crude oil production (thousands of cubic metres)	75 629	74 424	(2)
Raw gas production (millions of cubic metres)	95 381	98 271	3
Coal production (thousands of tonnes)	26 543	28 048	6
Oil and gas rights sales bonuses ($ millions)	662	725	9
Wells completed	6 040	7 811	29
Seismic shot (kilometres)	105 514	83 751	(22)

Source: Policy Analysis and Planning Division

Fiscal 1985/86 was a challenging year for the department in terms of new policy initiatives and changes in world events. The Western Energy Accord was concluded late in March of 1985 and was implemented on June 1, 1985. The accord removed controls on the pricing and marketing of crude oil and petroleum products.

The government announced a combination of royalty reductions and tax breaks for oil and gas production in June 1985. As a result of these policy changes industry activity during the year approached record levels.

On Oct. 31, 1985, the governments of the three western provinces and the federal government signed the Agreement on Natural Gas Markets and Prices which laid the foundation for the deregulation of domestic gas markets and provided for more liberal export conditions. The department has been actively involved in dealing with many complex issues which must be resolved during the transition to a market-oriented environment. By Nov. 1, 1986, prices for all gas entering interprovincial trade will be determined by negotiations between buyers and sellers.

Beginning in January 1986, world oil prices declined precipitously. However, the drop in prices did not have a significant effect on industry performance during the 1985 fiscal year. Although crude oil production fell slightly from 1984 to 74.4 million cubic metres, natural gas production was up three per cent to 98.2 trillion cubic metres, and coal production increased by six per cent, reaching 28 million tonnes (Figure 2). Land sales, a good indicator of future industry investment intentions, reached the third highest level ever, $725 million. However, much of the increase came early in the year and sales for the last quarter of fiscal 1985/86 were actually down. All indicators of industry activity increased in 1985/86 except seismic activity; seismic shot was 83 751 kilometres, down 22 per cent.

In response to the dramatic drop in the world oil price, the government announced two initiatives to aid the energy industry on April 1, 1986. The Royalty Tax Credit Program was enhanced to increase small producer cash flows and the Exploratory Drilling Assistance Program was designed to help maintain the economic viability of the drilling industry.

Policy Analysis and Planning

The Policy Analysis and Planning Division provides economic and financial analysis, research reports and resource-related information to department managers. The division also promotes energy efficiency through public programs and co-ordinates communications planning for the department.

Policy, Economic and Financial Analysis

During the year, Policy Analysis and Planning, in co-operation with other divisions and agencies, performed extensive analysis leading to major policy announcements or changes relating to crude oil deregulation, revisions to royalty rates and incentive programs, and natural gas marketing and pricing. In addition, analysis and evaluation of a number of proposed energy projects, including the Husky Heavy Oil Upgrader, the Syncrude expansion, the Shell Canada Solvex project and several in situ oil sands projects, were performed.

Crude Oil Deregulation

Pursuant to the March 1985 federal/provincial agreement on Energy Pricing and Taxation (Western Accord), the pricing and marketing of crude oil was deregulated on June 1, 1985. For the first time in more than a decade the price was determined by buyer-seller negotiations instead of being set by governments. Also, for the first time in a decade crude oil exports could be arranged without prior National Energy Board approval, on condition that the contract periods were one year or less for light oil, and two years or less for heavy oil. While the transition to a deregulated environment occurred fairly smoothly, a number of companies expressed concern that the Alberta prorationing system was inconsistent with deregulation, and would constrain their ability to compete in the United States market. A government-industry task force established to review prorationing concluded that while some companies were experiencing marketing difficulties those could not be attributed to prorationing.

Royalties and Incentives

After the conclusion of the Western Accord, the Government of Alberta reviewed its incentive programs and royalties with a two-fold purpose: first, to ensure that the benefits from the announced tax reductions would flow through to the industry; second, to implement the objective of rewarding success instead of activity through the incentives.

On June 24, the government announced the conclusion of its review and adjusted royalty rates and altered its incentives as follows:

1. Marginal royalty rates for old oil and gas would be reduced from 45 to 40 per cent between Aug. 1, 1985, and Aug. 1, 1987.
2. Marginal royalty rates for new oil and gas would be reduced from 35 to 30 per cent between Aug. 1, 1985, and Aug. 1, 1987.
3. The royalty tax credit for small producers was increased, effective April 1, 1986, from 50 per cent to 75 per cent of royalty liabilities. The maximum value of the credits was increased from $2 million to $3 million per eligible company or investor.
4. The Exploratory Drilling Incentive System (EDIS), Geophysical Incentive System (GIS), and Oil Royalty Exemption System (ORES) were terminated on July 31, 1985; the Alberta Petroleum Incentives Program (APIP) was terminated on March 31, 1986. They were replaced with three new royalty holiday programs:

- Crude Oil Royalty Holiday Program: This program applies from June 1, 1985 to May 31, 1988. For each eligible well the producer is allowed the greater of: 12 calendar months of royalty free production (not necessarily consecutive) or, a royalty free volume of oil calculated according to a depth related schedule. The maximum value of the holiday is $1 million per well.
- Exploratory Gas Royalty Holiday Program: This program applies from Aug. 1, 1985, to May 31, 1988. Originally authorized under EDIS regulations, it provides for the greater of a 12-month royalty-free period for each eligible well, or a royalty-free volume

of gas calculated according to a depth-related schedule. The maximum value of the holiday is $2 million per well.

- Deep Gas Royalty Holiday Program: This program applies after June 1, 1985, to all new wells drilled to a depth of 2 500 metres or more. The royalty holiday is a dollar amount calculated according to a depth-related schedule to be applied against royalties payable. It is designed to assist in higher-cost exploration for deeper gas reserves in the Western Sedimentary Basin.

Agreement on Natural Gas Markets and Prices

At the end of October 1985, the federal government, Alberta, British Columbia and Saskatchewan signed an agreement to set a timetable for deregulating domestic natural gas pricing and marketing, and to provide freer access for producers to export markets. The key elements of the agreement are as follows:

- A deadline of Nov. 1, 1986 was established for the deregulation of domestic gas pricing and marketing and the end of the flowback system administered by the Alberta Petroleum Marketing Commission.
- It was agreed to continue to Nov. 1, 1986, the then-existing Alberta border price and maintain the 1985 TransCanada Pipelines tolls for domestic service through a subsidy paid out of the flowback fund.
- Effective Nov. 1, 1985, specific categories of natural gas sales were exempted from price regulation. These included: new contracts covering direct sales to end-users; new, incremental sales to distributors; and competitive market program discounts to end users.
- A panel was appointed to review the role and operations of TransCanada Pipelines and Westcoast Transmission in the marketing and transmission of gas.
- Alberta removal permit criteria were to be revised to make them consistent with a deregulated environment.
- Amendments to the Alberta Arbitration Act were to be introduced to make it consistent with the deregulated environment.
- For export markets, the export price and volume criteria administered by the National Energy Board were revised as follows:
  a) the floor price for exports was changed so that the domestic markets adjacent to the export point, instead of the Toronto City Gate price, became the point of reference;
  b) removal of the comparison with competing fuels in the export market;
  c) removal of the requirement that exporters demonstrate that their sales would be incremental;
  d) removal of the volume limit on short-term exports and expediting the short-term export approval process.
- The National Energy Board was to hold hearings to examine whether the surplus test should be revised.

Evaluation of Major Projects/Monitoring of Markets

With the move to a deregulated environment the division began to carefully and intensely monitor world oil markets and prices, and assess their impact on the provincial economy and government revenues. In addition, Canadian and American natural gas markets came under close observation. Particular attention was paid to the United States for several reasons. New policies by the Economic Regulatory Agency (ERA) and the Federal Energy Regulatory Commission (FERC) led to increased gas-on-gas competition. In addition the Canadian gas industry was concerned that Congressional and U.S. regulatory actions could restrict Canadian access to the American market.

During the year a number of upgrading and oil sands projects were evaluated. Analysis was undertaken with respect to the Syncrude Expansion, the Husky upgrader, the Shell Solvex Project, the Murphy Oil Lindbergh in situ oil sands and several other projects. Approval to proceed was granted to the Murphy Lindbergh project making it the sixth commercial in situ project approved since mid-1983.

Energy Conservation

The division develops and implements information/education programs on the efficient use of energy. It also works with other departments, governments and utility companies to ensure a comprehensive service for Albertans and avoid duplication of energy conservation programs.

There are four program areas: industrial, transportation, residential and schools.

The industrial program provides energy audits, conducted upon request at non-residential buildings throughout the province. During 1985/86, energy cost savings of $3.13 million per year were identified in 304 audits. These

figures represent an average of 17 per cent of current energy costs. Audit support activities focused on completing the series of Alberta Energy $avers for Business and Industry booklets, and on displays, presentations and advertising.

Residential programs initiated a toll-free telephone inquiry service, Energy Matters, to handle questions from homeowners and builders. Two new titles increased the Alberta Energy $avers (residential) how-to-series to 10 booklets. Over the year, 266 120 copies were distributed through 794 outlets and the branch. Home Energy $avers Workshops were attended by 2 392 homeowners in 120 sessions across the province. Three advance-level seminars were developed to provide technical information on specific subject areas. Additionally, a builder's program to promote energy-efficient new and retrofit construction was introduced. School programs delivered the energy conservation message to 17 874 students in grades one to six at 125 schools. Further, 221 teachers and administrators attended workshops on how to use the branch's curriculum support materials. Developments in this area include continued revisions to existing curriculum kits and the creation of a program for students at the junior and senior high levels.

A newsletter, Energy Conservation Update, informs interested parties of the latest energy conservation initiatives and developments. During the reporting year, 10 issues were produced and circulation grew to 1 300.

Communications

The Communications Branch, serving both Energy and Forestry, Lands and Wildlife, is responsible for a broad range of public relations services, including public affairs activities, advertising, and editorial and publication services.

During the year most of the communications needs in Energy were reflected in the writing, editing, designing and production of various publications such as *Western Canadian Coal in Ontario*, *Metallic Minerals in Alberta*, *Metallic Minerals Royalty Guidelines* and *Guidelines: Crude Oil Royalty Holiday Program*, *Exploratory Gas Well Incentive Program*, *Deep Gas Royalty Holiday Program*.

Other publications included annual reports for the Advisory Committee on Heavy Oil and Oil Sands Development and the Alberta/Canada Energy Resources Research Fund. The division also handled media relations for the Advisory Committee's workshop in November 1985.

Public relations services provided in connection with energy conservation programs included communications planning, displays, advertising and a variety of publications aimed at industry, transportation, schools and householders. One notable departure was support of a federal program to promote supplements on saving energy in 81 daily and weekly newspapers. To stimulate the interest of editors and publishers, a contest was organized to recognize the best supplements.

An important department-wide publication produced for the first time during the year was the 250-page Guide to Programs, listing 330 programs and services offered by the department.

The Information Centre in Edmonton, now in its third year of operation, continues to be a valuable channel of communication between the department and its many publics. By contacting the centre, individuals and businesses can obtain printed information, ask questions or buy permits and licences. Use of this facility increased markedly in 1985/86.

Mineral Resources

Mineral Resources Division is responsible for formulating mineral resource policy, recommending legislation and exercising ministerial discretion in administering the Mines and Minerals Act, except for royalty and marketing aspects. The division also manages the Crown's mineral rights covering petroleum and natural gas, coal, oil sands, industrial and metallic minerals, placer minerals and salts. Other responsibilities include distributing mineral-related data and information and mediating complaints arising from exploration activity.

Issuance and Administration of Crown Agreements

Under Section 16(b) of the Mines and Minerals Act, the minister may offer for sale by public tender a petroleum and natural gas licence or lease covering undisposed Crown

Figure 3 - Active Mineral Exploration Agreements

	MARCH 31/85		ISSUED		CANCELLED		MARCH 31/86	
	Agreements	Hectares	Agreements	Hectares	Agreements	Hectares	Agreements	Hectares
Oil sands	5	30 336	7	46 912	1	3 944	12	73 280
Petroleum and natural gas	2 401	4 016 771	1 241	1 798 355	591	1 203 074	3 050	4 612 052
Metallic minerals	6	27 816	2	488			8	28 264
TOTAL	**2 412**	**4 074 923**	**1 250**	**1 845 715**	**592**	**1 207 018**	**3 070**	**4 713 596**

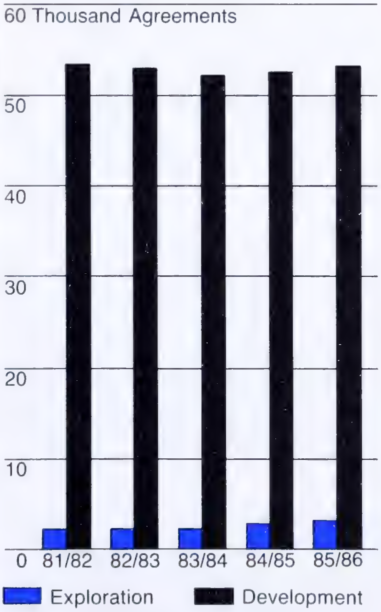
Source: Mineral Resources Division

Figure 4 - Active Mineral Development Agreements

	MARCH 31/85		ISSUED		CANCELLED		MARCH 31/86	
	Agreements	Hectares	Agreements	Hectares	Agreements	Hectares	Agreements	Hectares
Oil sands	254	2 555 011	18	51 893	6	22 015	266	2 584 889
Petroleum and natural gas	47 018	24 551 808	4 918	1 809 184	3 792	2 048 082	48 144	24 312 910
Coal and coal road allowance	3 261	1 401 483	27	11 598	152	132 275	3 136	1 280 806
Metallic minerals	6	3 139	1	64	1	130	6	3 073
Other minerals	134	20 935	4	376	3	100	135	21 211
TOTAL	**50 673**	**28 532 376**	**4 968**	**1 873 115**	**3 954**	**2 202 602**	**51 687**	**28 202 889**
Grand Total (Development and Exploration)	**53 085**	**32 607 299**	**6 218**	**3 718 830**	**4 546**	**3 409 620**	**54 757**	**32 916 485**

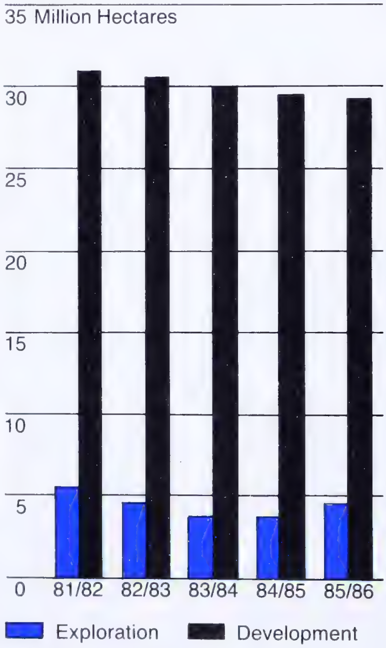
Source: Mineral Resources Division

Figure 5 - Mineral Agreements Outstanding



Source: Mineral Resources Division

Figure 6 - Mineral Hectares Outstanding



Source: Mineral Resources Division

petroleum and natural gas rights.

Petroleum and natural gas licences are offered for sale in unproven areas or unproductive geological zones. These areas and zones are generally considered to be more than 3.2 km from producing wells or wells capable of production.

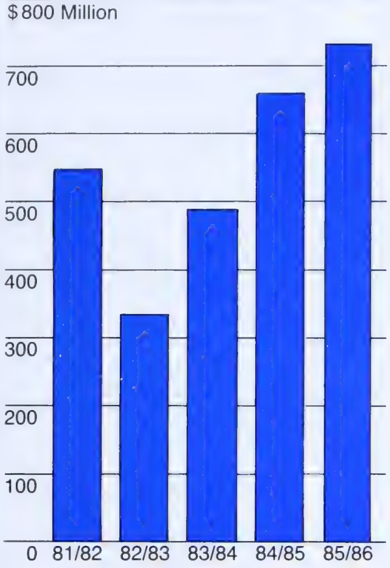
Petroleum and natural gas leases are offered for sale in areas where existing pools are being developed or where previously drilled wells have identified the existence of hydrocarbons. Developed areas or productive geological zones are generally considered to be within 1.6 km of producing wells or wells capable of production.

On March 31, 1986, there were 54 757 active Crown agreements covering 32.9 million hectares, compared to 53 085 agreements and 32.6 million hectares at the end of the previous fiscal year (Figures 3 and 4).

The number of exploratory agreements for 1985/86 totalled 3 070, an increase of 27 per cent over the previous year, while the area covered by the agreements was up by nearly 16 per cent, to 4.7 million hectares. Development agreements for the year increased by two per cent, to 51 687, but the outstanding hectares dropped by one per cent, to 28 million (Figures 5 and 6).

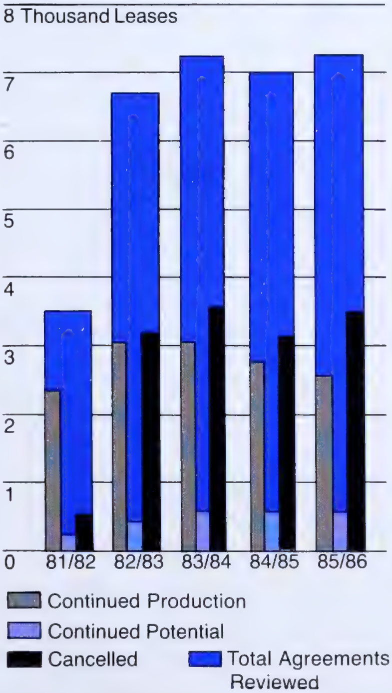
- **Oil and Gas Rights Sales** Twenty-five public offerings were held in Calgary during the year. Bonus considerations from the sale of 2.7 million hectares of petroleum and natural gas leases and licences totalled $725.1 million, 9.5 per cent higher than the previous year (Figure 7). Most of the exploration rights were purchased in northern Alberta, while the majority of development rights were for the plains area.

Figure 7 - Oil and Gas Rights - Sales Bonuses



Source: Mineral Resources Division

Figure 8 - Lease Continuation



Source: Mineral Resources Division

- **Continuation of Leases** On behalf of the minister, the department exercises substantial discretionary authority with regard to the continuation of petroleum and natural gas leases. The department's staff is used on geological, geophysical and engineering matters. Liaison with the Energy Resources Conservation Board is maintained through the department's senior technical geology adviser in Calgary.

During the past four years the number of leases expiring has been high but stable compared with historic levels (Figure 8). In 1985/86 a total of 6 621 individual petroleum and natural gas leases whose terms of five, 10 and 21 years expired were reviewed to determine whether they qualified for continuation. Of the total, 2 617 leases were continued due to established productivity. A further 541 leases or portions of leases considered to be potentially productive but not proven were continued for a further year, after payment of the $25 per hectare security required for the portion continued. The return of the security is contingent upon a well being drilled on each such lease to determine whether it is underlain by an oil or gas pool. The rest of the agreements, more than 3 400, expired. Of the 621 leases continued during fiscal 1984/85 as potentially productive but not proven, 390 were continued as productive, 228 were cancelled and three continued for a further period of one year.

The Mines and Minerals Act states that if the minister no longer considers a continued lease as being productive as to all or part of its location a written notice will be sent giving the lessee one year to provide further evidence of productivity. There were 609 notices that expired during 1985/86 and of these, 118 leases were proven productive in whole or in part and further continued. The remaining 491 leases subject to notices were amended to shallower productive zones, were amended by deleting non-productive lands or were cancelled.

All leases continued to date based on productivity were reviewed in 1985/86 and 2 270 notices were served giving Crown lessees one year to demonstrate productivity.

The legislation in the Mines and Minerals Act dealing with the continuation of leases was altered July 1, 1985, to incorporate two major changes. The first allows a larger lease area to be continued during continuous drilling operations. This provides additional discretion where the lessee is operating late in the life of the lease. This provision has been used fairly extensively since the change. The second change provides for reversion of non-productive deeper rights on a production spacing unit basis rather than on a lease basis. This ensures that non-productive rights are not retained by the lessee and that they are made available to other parties.

- **Unit Agreements** Unit agreements minimize operating costs in multi-lessee or multi-owner oil and gas pools and facilitate secondary and tertiary recovery. The division's responsibilities in regard to unit agreements are to ensure that the terms and conditions of Crown leases are not negated and, where diversity of mineral ownership exists, to ensure that the Crown's royalty participation is equitable.

During the year, 15 new unit agreements became effective, indicating that a sizable number of pools with diverse ownership were becoming depleted. Significantly, nine existing unitized areas were enlarged, indicating that new discoveries were made in areas adjacent to producing units.

- **Drilling Requirements** Ten-year petroleum and natural gas leases that reached the end of the sixth year of their terms during the fiscal year and on which a well had not been drilled are subject to statutory drilling requirements or payments of penalties to keep the lease active. As the number of 10-year leases outstanding declines, the corresponding number subject to drilling requirements has also decreased. During 1985/86, 1 326 leases were extended by payment of $11 million pursuant to this provision.

Oil Sands

A continuing interest in oil sands development was reflected in announcements of new commercial projects and the expansion of existing projects to increase capacity.

During the fiscal year, 27 new oil sands leases and 15 oil sands prospecting permits were granted or applied for. Six oil sands leases were renewed for second 21-year terms.

Companies planning to accelerate commercial exploration or the testing

of new technology requested three exchanges of oil sands rights to consolidate their present rights.

Coal

Coal developments reflected two vastly different aspects: stable domestic markets for thermal coal and volatile export markets for coking coal.

The division renewed 44 coal leases and issued five coal road allowance leases within existing or newly approved mine licences. The coal industry continued a reassessment of its holdings, resulting in 139 leases being surrendered.

The reduction in the areas of Crown coal rights under leases was reflected in decreased coal lease rental payments from $3.7 million to $3.1 million.

There was increased coal exploration activity, with 684 holes being drilled in 1985/86, compared to 190 holes in 1984/85.

A total of $1.35 million in work deposits were refunded to coal lessees for expenditures they incurred in exploration.

Metallic, Quarriable and Other Minerals

The metallic mineral industry maintained the level of activity started in 1984. Eight applications for metallic mineral exploration permits were received by year end, one additional metallic mineral exploration permit was issued and one mineral claim was converted to a metallic mineral lease. Extensive drilling was conducted on a number of permits and leases but no major discovery of mineralization was announced.

Increased interest was shown in Crown quarriable mineral rights and four new leases were issued.

Steady gold prices sustained interest in placer mineral rights. The division issued 94 new placer mining permits and renewed five placer mining leases.

Exploration, Compensation and Complaints

During the first part of the fiscal year the division administered the exploratory drilling and geophysical incentive systems. These systems were under review at the end of 1984/85 and were extended to July 31, 1985, to allow the industry time to prepare briefs on what form any future incentive programs should take. On June 24, 1985, the provincial government replaced the incentive systems with the Crude Oil Royalty Holiday Program, the Exploratory Gas Well Royalty Holiday Program and the Deep Gas Royalty Holiday Program, all of which are administered by the Mineral Revenues Division.

The Mineral Resources Division's continuing responsibilities include conducting field inspections of exploration activities and landowner complaints.

- **Exploration** Before the incentive systems were replaced, incentive credit payments for the year totalled $58.7 million for 492 exploratory wells. In the geophysical section 1 154 programs qualified for $60.2 million in incentive credits.
- **Compensation and Complaints** Mineral Resources and Mineral Revenues divisions together administer the payment of compensation to lessees of mineral agreements located in areas where exploration or development is not in the public interest.

  During the year, a total of $3.6 million was paid out as compensation. This total payment covered six claims encompassing two petroleum and natural gas leases, 23 coal leases and one quarriable minerals lease, covering a total of 18 809 hectares. Five new applications for compensation were received, while 16 applications received in the previous year were still under negotiation.

  A field staff of eight exploration inspectors is responsible for investigating complaints arising from exploration activity in the settled portions of the province. The staff also recommends remedial action and penalties for operations of exploration equipment that contravenes the Exploration Regulation. Landowner complaints have increased one per cent from the previous year. Of the 322 complaints received, 293 were resolved by the year end.

Well Licence Deposits

On Jan. 24, 1986, the Energy Resources Conservation Board (ERCB) amended the Well Licence Deposits regulations. As of that date, deposits ranging between $2 500 and $10 000 are no longer required to guarantee the proper drilling, control, completion, suspension or abandonment of wells. In place of the deposits, the board has established a special well fund to finance abandonment or other operations necessary where a licensee cannot be found or is unable to carry out proper operations.

Since the regulations came into being, Mineral Resources provided the administrative services to the ERCB on a complimentary basis. From April 1, 1985, however, the ERCB was charged for the cost of manpower. It is expected that the refund of deposits under the old legislation will be completed by the end of May 1986.

Scientific and Engineering Services

Scientific and Engineering Services Division has two main responsibilities: to manage research programs and to provide advice and support to the deputy ministers of the department. In addition, the executive director of the division is the chairman of the Alberta Office of Coal Research and Technology (AOCRT), which receives administrative support from the division.

In 1985/86 division efforts were concentrated on managing two major research programs: The Alberta/ Canada Energy Resources Research Fund (A/CERRF) and the province's Reclamation Research Program.

Alberta/Canada Energy Resources Research Fund

The research funding program was created as a result of the 1974 agreement between the oil producing provinces and the Government of Canada to hold the wellhead price of domestic crude oil at $6.50 per barrel from April 1, 1974 to June 30, 1975.

A/CERRF priorities include research, development and demonstration projects in coal, energy conservation and renewable energy.

Coal Research Program

A/CERRF supported 45 research projects during 1985/86. Research funding contributions by AOCRT totalled $4.4 million during 1985/86. Contributions by industry and other research groups to these projects totalled $1.9 million. Fifteen new proposals were being considered at March 31, 1986.

A major initiative during the year was the joint planning of an industry/ government coal combustion and utilization research program. This program is expected to result in several new projects directly related to industry needs and should enhance markets for Alberta and other western Canadian coals.

A second focus for industry/government collaboration was the application of improved geophysical techniques to assist mine planning and development which leads to reduced mine development costs.

Agreement was reached with the Alberta Research Council regarding future funding by AOCRT for coal research by the council. This agreement reflects a reduced emphasis on the early application of coal liquefaction technology and the continuing importance of conventional coal uses. It also recognizes the need for the council to establish stronger links with the private sector interested in coal development.

AOCRT worked closely with the Coal Mining Research Company (CMRC) during the latter's restructuring. It has agreed to a three-year funding plan, beginning in 1985/86, which emphasizes the importance of industrial funding support of CMRC.

In addition to supporting fundamental research through its Coal Research Grants Program, AOCRT recognizes the importance of establishing an effective program for transferring technology to the coal industry.

Energy Conservation/ Renewable Energy Research

Activities in 1985 focused on projects related to energy conservation in buildings, waste heat recovery and wind energy.

Within the Energy Conservation in Buildings Subprogram, support continues for projects related to developing and demonstrating new building components, energy management systems and controls and conservation retrofit techniques. In addition, the program funded the evaluation and development of new energy-efficient gas furnaces and it funded an analysis of air leakage in residential homes and related retrofit measures in single- and multi-family dwellings. Several new

projects focus on the more efficient use of existing equipment in institutional and commercial buildings such as reducing peak loads with emergency generators, free-cooling and dehumidification methods and reducing energy consumption in ice arenas by using reflective ceilings. Twenty-seven projects were supported and experimental or field work on 14 of them was completed in 1985/86.

A new Waste Heat Recovery Subprogram was implemented in 1985. From 28 submitted proposals, nine projects were approved for funding support. Work in this area concentrates on applying heat recovery technology in commercial and industrial sectors such as laundries, meat packing plants, dairies and recreation facilities. In addition, efforts are being made to assess and, if possible, demonstrate the potential use of small-scale co-generation equipment in commercial and institutional buildings and facilities. One project will test the potential application of industrial waste heat for agricultural purposes such as enhanced crop production.

The Wind Energy Subprogram continued to support three previously active projects: the Solar and Wind Energy Research Program conducted by the Alberta Research Council, the further development and performance testing of the Delta-Blade Wind Turbine Technology of Delta Windpump Corporation/Abax Energyservices Ltd., of Calgary, and the extended Small-Scale Wind Turbine Demonstration project, conducted by Alberta Agriculture in Lethbridge.

Reclamation Research

The Reclamation Research Program is funded through Alberta Environment, but administered by the Interdepartmental Reclamation Research Technical Advisory Committee. The chairman is a member of the division.

The program was designed to incorporate three industry/government subprograms: a) Plains Coal, b) Oil Sands and c) Mountains and Foothills. Industry support for the Oil Sands and Mountain and Foothill programs makes up 50 per cent of the total research budget. Industry also supported the Plains Coal Program by constructing test plots and providing access, staff and records. Seventeen research projects were supported in 1985/86. The provincial government contributed $1.3 million.

Results from the Plains Coal Program provide regulatory agencies and industry with a rational basis for reclamation, evaluation and planning. The more recently developed Oil Sands and Mountain and Foothill Coal programs are expected to yield similarly important results within the next four years.

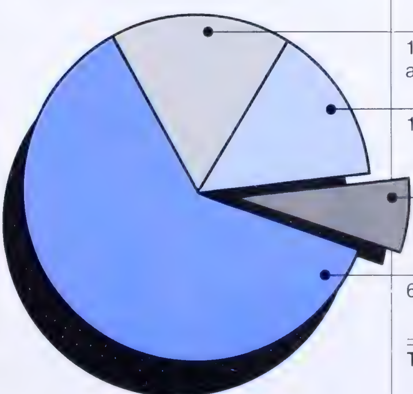
Advisory and Support Services

The other major responsibility of the division is to provide technical advice and support to the department. These services have been exercised in a variety of ways during the year, but generally in response to specific requests. Significant effort was directed towards further understanding market opportunities and constraints associated with coal development in the province. The Alberta Coal Development Adviser, appointed by the Minister of Energy and Natural Resources on Dec. 18, 1985, receives administrative support from the division.

Members of the division participated in a number of task forces or committees, including the Interprovincial Advisory Council on Energy (IPACE), R&D Co-ordinating Committees, the International Energy Agency Working Party for Fossil Fuels, the Keephills Power Project Steering Committee, the Chamber of Commerce Coal Committee, the Alberta Chamber of Resources Board of Directors, Alberta Government Technology and Research Advisory Committee and the Interdepartmental Committee for Intellectual Property.

The distribution of the division's research and program expenditures, most of which were allocated to coal research and development, is shown in Figure 9.

Figure 9 - Research and Program Expenditures 1985/86



16.7% Energy Conservation and Renewable Energy

14.2% Reclamation

6.6% Advisory Services

62.5% Coal

Total Budget $9.1 million

Source: Scientific and Engineering Services Division

Alberta Petroleum Incentives Program

The Alberta Petroleum Incentives Program (APIP) was created to encourage petroleum and natural gas exploration and development in Alberta. The program also supports enhanced oil recovery projects.

APIP was created by the Petroleum Incentives Program Act passed by the Alberta Legislature in November 1981, subsequent to the Canada/Alberta Memorandum of Agreement on Energy Pricing and Taxation concluded in September of that year. Under the terms of the agreement, Alberta undertook to administer and fund the portion of the federal Petroleum Incentives Program applying to oil and natural gas exploration and development activities in Alberta. The federal Petroleum Incentives Program was created in October 1980 to provide cash grants to Canadian-owned and -controlled companies in lieu of the earned depletion allowances provisions of the corporate income tax system.

Under APIP, eligible applicants may obtain incentive payments equal to a percentage of their incurred eligible costs and expenses. These include expenses for drilling and completing exploration and development of oil and gas wells, geological and geophysical expenses and asset costs related to enhanced oil recovery projects.

In 1985/86 APIP received 9 175 applications for a total of 27 454 applications since the program began. Incentive grants totalling $504.6 million were paid, bringing the total to $1.7 billion since the program started.

Under the terms of the legislation creating APIP, the period for incurring costs and expenses eligible for incentives was to run from Jan. 1, 1981, to Dec. 31, 1986. On June 24, 1985, following extensive review of its oil and gas incentives policies and programs, the Government of Alberta announced that the period would be shortened by nine months to March 31, 1986. At the same time, the government announced that certain activities would be ''grandfathered'' - that is, exempted from the new deadline. In developing grandfathering guidelines, APIP officials met with industry representatives and applicants to obtain their input and invited anyone interested in the guidelines to make submissions. Twenty-six submissions were received and reviewed.

In accordance with the changes to the program announced on June 24, 1986, the deadline for filing applications for APIP incentives is Dec. 31, 1987.

Alberta Oil Sands Equity

Alberta Oil Sands Equity manages Alberta's investment in the Syncrude Project and in an exploration and development program on six oil sands leases in northeastern Alberta.

During the year the Syncrude Project produced a record 6.6 million cubic metres (41.5 million barrels) of synthetic crude oil. Alberta's 16.74 per cent participation in the project earned a net profit of $72 million, compared to $86.5 million in 1984/85. At March 31, 1986, Alberta's participation in the project amounted to $458.6 million, which consisted of net cash advances of $120.1 million and accumulated profits of $338.5 million.

Falling oil prices have had a major effect on the project. The price received for Alberta's share of production in March 1986 was at its lowest level since 1979. As a result the Syncrude owners took the following actions:

- The 1986 operating budget was reduced by $90 million and the target is for actual 1986 expenditures to be less than the budget.
- The 1986 capital expenditures for the project were reduced by $164 million and spending was limited to completing work in progress and to

projects that ensure safe and reliable operation of the plant.

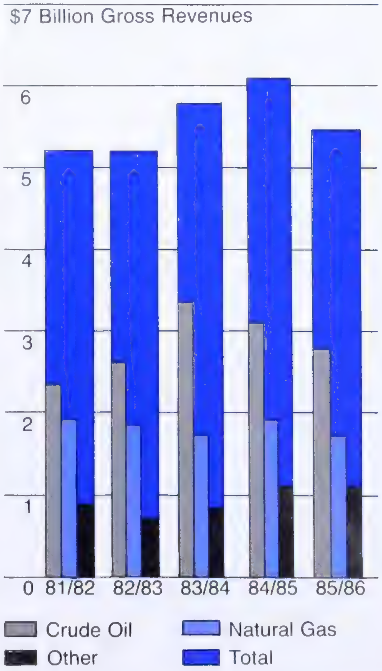
- The schedule for the Capacity Addition Project (CAP) was changed from a fast-track one that would have seen the project completed by the end of 1987 to the original schedule, with completion in 1988. Further delays are possible if prices remain low.

The Syncrude owners and the government agreed on a funding arrangement that will ensure completion of the basic engineering and planning for a major expansion of the Syncrude Project. The work should be complete by the end of 1988. Alberta will provide the necessary funding for the basic engineering and planning and the owners have agreed to repay the Alberta government from the proceeds of the expansion when construction is completed. The estimated cost of expansion engineering is $85 million, of which about 75 per cent will go to engineering contractors.

Alberta Oil Sands Equity is a member of the Other Six Leases Operation (OSLO) constortium along with five oil companies that have been conducting an exploration and development program on six oil sands leases in the Fort McMurray area. During the fiscal year 1985/86, work continued on studies to determine the proper size of a commercial project and the processes that would be used. As a result of reduced oil prices in 1986 the pace of the program has been slowed considerably for the second half of 1986.

Mineral Revenues

Figure 10 - Energy Revenues



Source: Mineral Revenues Division

The mandate of the Mineral Revenues Division is to administer and advise on the Alberta government's royalty, mineral tax and incentives legislation to ensure that the Crown receives its share of non-renewable resource revenue. Revenues generated for the fiscal year amounted to $5.6 billion (Figure 10). They were influenced by the deregulation of oil, the decline in petroleum and natural gas prices in the latter part of the year, and the reduction in the Crown's marginal royalty rates in August.

During the year events such as the deregulation of crude oil and the partial deregulation of natural gas triggered a thorough and on-going review of policy and practice in these areas. In the latter part of the fiscal year the downturn in energy pricing brought about a re-examination of specific Crown royalty agreements in the oil sands area and in incentives generally. April 1, 1986, saw the introduction of the Exploratory Drilling Assistance Program as a step in addressing the latter.

The four main areas of the division are Energy Revenue Policy, Revenue Operations, Revenue Audit and Royalty Information Management and Control.

Energy Revenue Policy

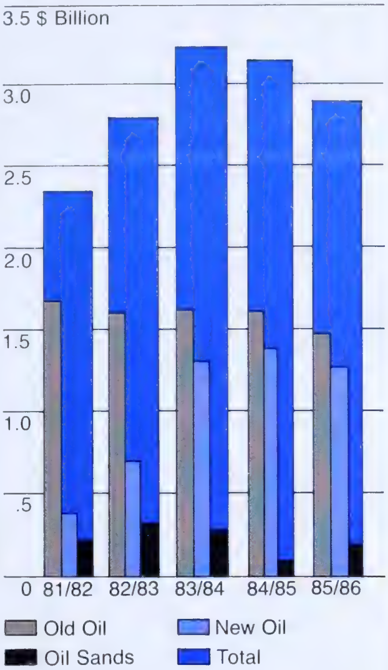
Energy Revenue Policy addresses issues of concern to industry and the division. It formulates administrative policy and constantly reviews existing practices affecting the divisional mandate and provides a research capability to support policy development. Emphasis has been placed on developing human and technical resources necessary for effective decision-making and legislative planning. Computer modelling capabilities have been developed, facilitating financial and economic analysis. Major policies under review include Field Straddle Plant Royalty Status, overall injection activity and Enhanced Oil Recovery Royalty relief. The area of legislation planning will intensify over the next fiscal year as regulations are reviewed and revised to accommodate the effects of deregulation and the further development of gas royalty administration.

Revenue Operations

Revenue Operations covers petroleum royalty, gas royalty, incentives, synthetics and heavy oil, and mineral tax, coal and other royalties.

- **Petroleum Royalty** With oil deregulation, systems and procedures were revised to accommodate the new arrangement under which producers deliver to the Alberta Petroleum Marketing Commission only the Crown's royalty share of production rather than all production, as was the case in the past. Close consultation with the petroleum industry, the Alberta Petroleum Marketing Commission

Figure 11 - Petroleum Crown Royalties



Note: Old oil is conventional oil produced from pools discovered before April 1, 1974. New oil is conventional oil produced from pools discovered after March 31, 1974.

Source: Mineral Revenues Division

and the Energy Resources Conservation Board facilitated the administrative revisions. A breakdown of the royalties received from petroleum production is shown in Figure 11.

- **Natural Gas Royalty** The year also saw revision of the gas royalty administration system, developed jointly by industry and the division. At the same time, new royalty guidelines were published and explanatory seminars conducted to maintain the effective communication established during the revision of the administration process. The revised system addressed the inherent complexities in covering more than 30 000 producing wells, 2 000 gas processing facilities and in excess of 600 industry clients. Gross sales revenues of gas and gas products exceeded $7 billion for the year and provided Crown royalties of $2.1 billion (Figure 12).
- **Synthetics and Heavy Oil** Oil Sands production activity experienced, in the main, a rewarding year, tempered somewhat by the rapid decline in oil prices in the last quarter.

Eight commercial in situ oil sands projects have received approval from the Energy Resources Conservation Board. Six are operating: Amoco Elk Point, BP/Petro Canada Wolf Lake, Esso Cold Lake (Phases I-VI), Shell Peace River, Dome Lindbergh and Murphy Lindbergh. Capital investment to date amounts to $1.2 billion. Total production capability of these facilities is 83 500 barrels per day. Future expansion phases of the six would result in increased production capability of 215 000 barrels per day, and would require capital expenditures of about $2.6 billion.

Each commercial project has a separate Crown royalty agreement. These agreements recognize the significant front-end capital costs of the projects and provide for phased-in royalty structures. Royalties for the year from these agreements amounted to $2.4 million.

In addition to commercial projects, there are 33 ERCB-approved experimental schemes, 16 of which are in production. These experimental schemes generated Crown royalties of $16.9 million.

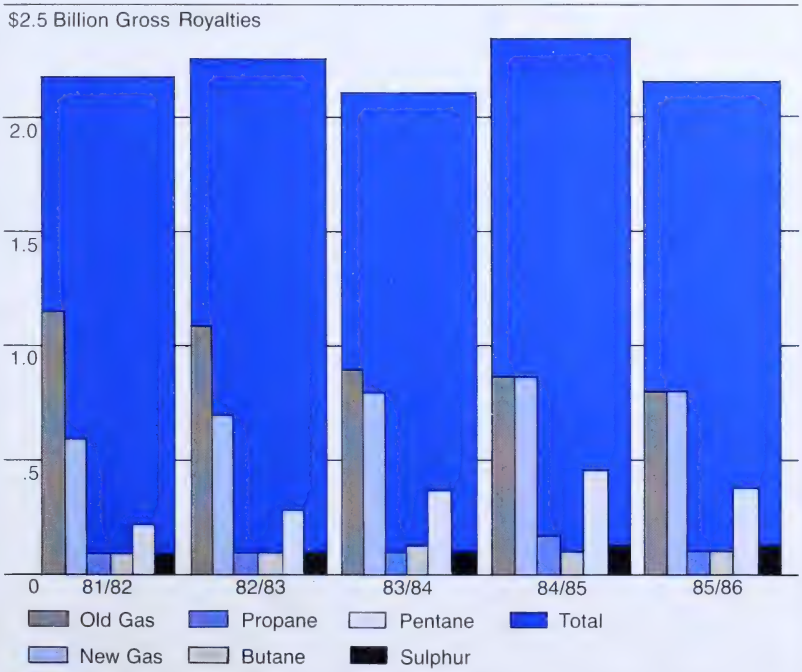
Commercial oil sands mining operations experienced the same positive year as in situ projects, with production levels reaching 63.5 million barrels, compared to 48.6 million barrels for the previous year. Crown royalties from the two commercial mining operations, Syncrude and Suncor, amounted to $229 million.

An announcement was made at the end of the year concerning a jointly funded experimental project for the removal of bitumen from oil sands using a solvent extraction process rather than the current hot water method. The end product will be sold as bitumen, whereas commercial schemes today produce a partially refined bitumen known as synthetic crude oil. Successful proving of the technology could lead to more efficient oil sands development through higher bitumen recovery rates, lower energy costs and the elimination of tailings pond requirements. The division negotiated a specific royalty agreement for this project.

- **Incentives** The province provides incentives to the industry to encourage oil and gas exploration and production. Usually incentives are royalty reductions but some are cash grants. In 1985/86 the total value of incentives administered by the department was more than $800 million.

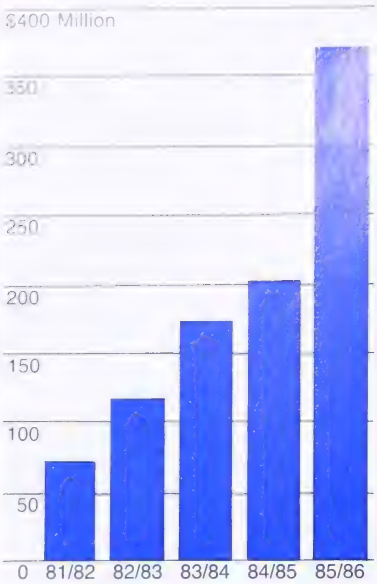
The incentives area experienced an active year with the phasing out

Figure 12 - Natural Gas Royalties



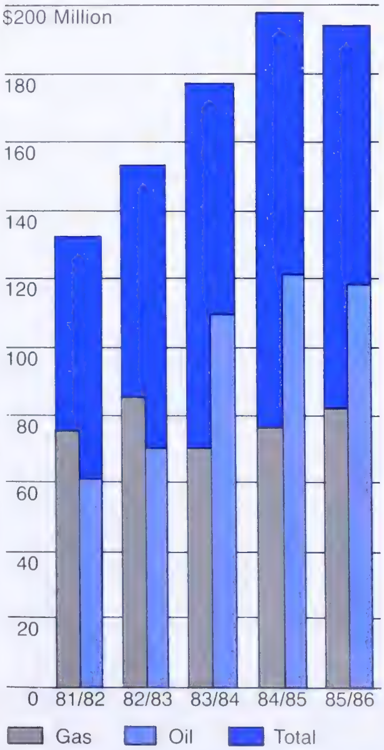
Source: Mineral Revenues Division

Figure 13 - Enhanced Oil Recovery Relief Under Section 4.2



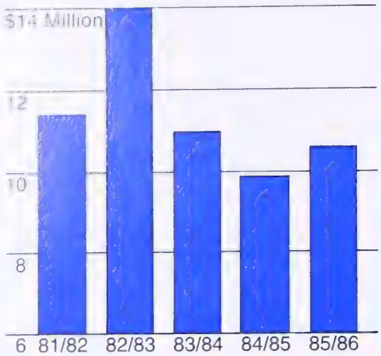
Source: Mineral Revenues Division

Figure 15 - Mineral Tax - Oil and Gas Levy



Source: Mineral Revenues Division

Figure 14 - Coal Royalty



Source: Mineral Revenues Division

of the Exploratory Drilling Incentive System and the Geophysical Incentive System programs and the introduction of three new royalty holiday programs designed to reward exploration success: Crude Oil Royalty Holiday Program, Exploratory Gas Well Holiday Program and Deep Gas Royalty Holiday Program. These new programs, which are outlined in another section of this report, provide royalty relief for a specified period or a specific amount of production. Currently more than 1 200 producing oil and gas wells are receiving some form of royalty holiday. During the year more than 800 applications were received under the new programs.

As part of the review of royalties and incentives, the government announced a phased-in reduction of its marginal royalty rates (see Policy Planning and Analysis).

The royalty relief program to encourage enhanced oil recovery (EOR) continued. EOR employs advanced technology to recover more oil from a pool than is possible with conventional techniques. The Crown supports EOR through a royalty relief program under Section 4.2 of the Petroleum Royalty Regulations (Figure 13). This year seven new schemes were approved, bringing the total to 41. The continuation of these schemes will represent a capital investment of $1.5 billion by 1990. Tertiary oil production for the fiscal year was 94 000 barrels per day, attracting royalty relief of $380 million. Four schemes are under review for Section 4.2 approval and 20 are in the planning stage.

- **Coal and Other Minerals** The coal industry faced a difficult year, particularly in the export market, but production and sales increased by four per cent over the previous year. Gross royalty increased by three per cent to $21 million, while net royalty increased by 13 per cent to $10 million (Figure 14). The disproportionate percentage increase of net royalty resulted from the expiry during the year of previously legislated royalty relief for specific mining operations. In the face of continuing difficulty in coal demand, a thorough review of the coal royalty regime has been initiated. The results of this review are expected early next year. In other minerals, revised legislation for metallic minerals was introduced during the year and royalty guidelines published. The legislation creates a 10-year stable fiscal regime to promote and encourage mineral exploration in the province.
- **Freehold Mineral Tax** Mineral tax is calculated on production from oil and gas properties and applied to the titles of those properties. In 1985/86 there were 15 988 such titles, resulting in gross tax assessment of $195.3 million, of which $114.6 million was realized from oil production and $80.7 million from gas (Figure 15). Phase-in provisions of EOR relief reduced this revenue to $186.3 million. The Freehold Mineral Rights Tax Act provides for an exemption for each mineral right of the first $1 600 of mineral tax. The application of this provision exempted 8 782 titles from paying mineral tax.

Revenue Audit

Reorganization during the year created two field audit groups, one in Edmonton and one in Calgary, and a validation audit group based in Edmonton. The field audit groups perform cyclical audits of industry records. This responsibility has increased with the inclusion of the audit of the Syncrude Royalty Agreement, formerly audited by the Office of the Auditor General. The royalty and cost values audited by the field audit groups in the areas of royalties, incentive scheme claims and mineral tax exceeded $2.3 billion. The validation audit group, using the resources of the Mineral Revenues System (MRS) data base and up-to-date computer technology, designs and interprets comparative and trend analyses to highlight anomalies in

reported data and industry allocation practices.

Royalty Information, Management and Control

The major function of this area is to manage the division's computer system and to ensure the integrity of the data contained within it.

There are seven subsystems in MRS which together comprise a fully integrated operating environment covering oil royalty, gas royalty, common data, mineral tax, incentives, condensate royalty and analytical reporting. The system, developed through the use of advanced relational database software technology, contains a vast amount of data valuable for control and research purposes. The flexibility of the system permits the division to respond quickly to the demands of the dynamic environment in which business is conducted. During the year significant changes arising from the deregulation of oil and the introduction of royalty incentive programs were successfully implemented.

Finance and General Services

The Finance and General Services Division, serving both Energy and Forestry, Lands and Wildlife, provides centralized support services in accounting, finance and administration.

The wide range of accounting responsibilities includes processing invoices, recording and depositing revenue, managing the collection of outstanding accounts, controlling the fixed asset recording system, and preparing quarterly and annual statements of revenue and expenditures.

Some 160 000 client accounts are controlled in the Main Accounts Receivable System (MARS), which is linked with systems in mineral revenues, mineral agreements, land status and timber revenue. In 1985/86 revenue collected and deposited totalled $5.6 billion.

In accounts payable, invoices are expedited for payment, resulting in one of the best records for timely payment within the provincial government. A new electronic filing system, using microfilming equipment and microcomputers, has been implemented for faster tracking of invoices.

Computerization also has saved manpower costs and ensured better service in handling the payroll for hundreds of forest firefighters. With the microcomputer unit, T4As for income tax purposes are issued earlier and inquiries can be answered faster.

Financial Planning and Control co-ordinates departmental budgets, develops and interprets financial policies and co-ordinates the preparation of financial information for management. It also plays a key role in updating financial processes through the use of microcomputers.

The division also provides a full range of administrative support, including records management, drafting, telecommunications and operation of the Land Status Automated System (LSAS).

During the year implementation of LSAS brought the ability to capture all data on agreements affecting surface rights on public lands. With these data as an information source, the department can complete agreements with interested parties more efficiently while ensuring there are no conflicting agreements.

In records management, further expansion of the File Room On-Line Information Control System (FROLIC) was completed. This second phase provides a common subject base that allows divisions to be aware of all departmental files on any given subject, thus giving access to complete information on the subject before decisions are made by officials.

With a new computer drafting system and a paper plate maker the division is now able to speed up the design of forms and to produce internally many of the forms and other documents required by the department.

Automated Information Systems

The Automated Information Systems Division provides technical expertise and leadership in automated data and word processing systems to all divisions of Energy and Forestry, Lands and Wildlife. On March 31, 1986, the department had 61 operational systems. Ten systems were being developed or improved during the year. The cost of systems activities was $13.1 million.

Formerly known as Systems Planning and Development, the division was reorganized and renamed after 24 members of the production systems staff were transferred from Public Works, Supply and Services to what was then Energy and Natural Resources. In addition, word processing staff responsible for acquisition and training of departmental facilities and staff were transferred from another division within the department.

The division is now able to provide better support for the department's integrated systems, particularly those which are partly implemented but are still being developed, such as the Land Status Automated System (LSAS) and the Mineral Revenues System (MRS).

In the field of strategic planning the division developed a long-range automated information processing plan, with special attention paid to office systems, telecommunications, systems integration and strategies for developing and maintaining systems. The division also participated in the provincial government's EDP Strategic Planning Committee.

Special efforts were made during the year to integrate the land management systems influenced by the departments. These efforts included the formation of a Board of Directors - Land Management Computer Systems to review and approve plans for systems operations and to set priorities for improving land management systems supporting operations of more than one division.

Increased use of automated systems in the departments has created a need for considerable EDP training. Courses and programs offered in 1985/86 included a training program on the organizational impact of automated information systems, given to more than half the departments' managers; basic computer courses at the Forest Technology School, Hinton; and product-specific courses, mostly in the microcomputer area.

The year saw several significant developments in the use of data processing tools to increase productivity and reduce costs:

- Some evaluation was done on software supporting the downloading of mainframe data to microcomputers. This will facilitate user access to and manipulation of the departments' automated data assets.
- System prototyping methods were used extensively so users could test systems before substantial investments were made.
- Costs were reduced through the increased use of microcomputers over manual, minicomputer and mainframe computer alternatives.

In addition, a global microcomputer equipment maintenance agreement was signed with a private firm, resulting in a 35 per cent saving over previous maintenance agreements.

Systems developments during the year included completion of the major component of the Alberta Forest Service's microcomputer-based Warehouse Inventory System (WINS), bringing better inventory control in forest headquarters and the provincial forest service depot. Development started on the subsurface portion of LSAS, with implementation to take place in two stages over the next two years. The subsurface portion will be integrated with the surface lands section, which was completed in 1985. Also, development activities continued on MRS, dealing primarily with gas royalty and the Western Energy Accord.

Personnel Services

Personnel Services Division is responsible for providing services in the areas of recruitment, classification, wage and salary administration, employee relations, staff and organizational development, and occupational health and safety.

During the year the division provided services for 2 523 permanent positions, 232 project positions and approximately 3 000 wage employees. Although there was a slight decrease in employment levels - 62 permanent and three project - human resource activities remained at a high level, with emphasis being placed on organization reviews. These reviews throughout the department created significant increases in classification activities, organizational structuring, workload effectiveness studies and general organizational intervention. Recruitment activity remained fairly constant but the time required to recruit staff increased significantly due to the high numbers of qualified applicants.

The wage payroll system was converted to the Alberta Financial Information System (AFIS) in October, 1985. Additional programs administered by the division include the Priority Employment Program (172 individuals), the Summer Temporary Employment Program (285), and the Employment Skills Program (90). A work experience program, conducted in co-operation with the Edmonton school system, provided 20 students with work experience.

In 1985/86 emphasis was placed on the development of a Human Resource Planning System for the department. A Human Resource Advisory Planning Committee (HRAC) was formed, composed of division heads and chaired by the Associate Deputy Minister, Finance and Administration. This committee is responsible for advising on planning and developing human resource policies and priorities to meet divisional goals and requirements.

In training and development, attention was focused on reviewing the needs in these areas and on establishing a planned approach to the training and development process, including developing and implementing a departmental training model to identify and link organizational and individual needs.

A skills-related modular training program, Managing Human Resources, was developed and implemented for all supervisors. The pilot program involved middle and senior managers who were subsequently trained as instructors.

A plan for an Executive Development Program was established by a committee of senior executives. The plan reflects an approach which will result in development of a program designed to meet the specific needs of executives as well as the organization.

An organizational survey completed during the year involved interviewing a cross section of department managers and executives about the organization and other issues. The data collected were invaluable in developing a manpower planning strategy.

Another initiative introduced was the Succession Planning Program. A model was established and presented to senior executives. The model and process will be usd on a pilot basis in 1986/87.

A five per cent reduction was reported in the number of lost time accidents, but there was an increase in the number of lost time days, from 1 120 to 1 261.

The Forest Technology School continued to provide educational services in support of departmental activities. Slightly longer courses resulted in a six per cent increase in the overall use of the facility. Twenty-one hundred persons participated in various training activities. Fire control training retained its prominent role, with particular emphasis being given to mountain fire behavior.

The Forest Technology Program, offered in conjunction with the Northern Alberta Institute of Technology, experienced some recovery in enrolment but a marked decline in numbers is again forecast. The curriculum underwent some adjustments to reflect changing technologies and employee requirements.

Internal Audit

Internal Audit Division assists management in the effective discharge of its responsibilities by providing analyses, appraisals, recommendations and comments.

Reporting on financial activities continues to be important. More emphasis has been placed on reviewing techniques used by management to evaluate program efficiency to ensure that results are consistent with objectives. Two management audits, which included a review of these techniques, were completed and were well received by management.

Major computer-based systems are being examined to determine whether controls are adequate and whether the needs of users and objectives of the system are being met.

Audits were completed according to plan, including numerous special reviews for management. In addition, deficiencies identified by earlier audits were reviewed to ensure corrective action was implemented. The use of private-sector chartered accounting firms enabled staff to spend more time on unique departmental activities.

The three-year audit program, a blueprint of future audit operations, is being updated in consultation with divisional management. It addresses the needs of the department and provides management with an operational overview.

Financial Statements

ALBERTA ENERGY
Statement of Revenue
For The Year Ended March 31, 1986
(Unaudited)

	1985/86 ($ 000)	1984/85 ($ 000) (Restated)
Royalties		
Oil, conventional and synthetic, and products	$ 2 759 704	$ 3 053 671
Natural gas and products	1 805 934	1 942 413
Coal and other	14 193	9 808
	4 579 831	5 005 892
Rentals and Fees		
Oil and natural gas, and synthetic oil	84 615	83 367
Coal and other	3 304	3 703
	87 919	87 070
Crown Sales, Oil and Natural Gas Agreements	724 418	662 134
Mineral Taxes	188 673	185 527
Crude Oil Export Charges	78 354	194 572
Miscellaneous—Other	685	553
Gross Revenue	**5 659 880**	**6 135 748**
Less Incentive Credits		
Exploratory Drilling	30 595	64 281
Geophysical	13 597	63 711
	44 192	127 992
Net Revenue	**$ 5 615 688**	**$ 6 007 756**

Prepared by Financial Accounting Branch, Finance and General Services Division, October 20, 1986

ALBERTA ENERGY
Statement of Expenditures
For the Year Ended March 31, 1986
(Unaudited)

	1985-86 ($ 000)	1984-85 ($ 000) (Restated)
Financial, Administration and Policy and Advisory Services Divisions		
Finance and General Services	$ 2 433	$ 2 303
Automated Information Systems	1 012	1 412
Personnel Services	656	601
Internal Audit	117	108
Policy Analysis and Planning	3 257	3 253
	7 475	7 677
Other Divisions		
Mineral Resources	9 357	5 906
Mineral Revenues	9 199	5 574
Scientific and Engineering	4 724	10 309
Alberta Oil Sands Equity	1 226	974
Alberta Petroleum Incentives	7 740**	8 100
	32 246	30 863
Executive Offices	1 230	1 082
Special Program		
Ethane Feedstock Price Equalization Program	48 206	17 858
Total Expenditures	**89 157**	**57 480**
Less expenditure recoveries:		
Alberta Petroleum Incentives Program	7 669**	8 026
Other	803	722
Net Expenditures	**$ 80 685**	**$ 48 732**

** *See Note 3*

Prepared by Financial Accounting Branch, Finance and General Services Division, October 20, 1986

ALBERTA ENERGY
Notes to the Financial Statements
For the Year Ended March 31, 1986

Note 1 - Comparative Figures
The 1984/85 figures have been restated where necessary to conform to the 1985/86 presentation.

Note 2 - Statement of Expenditures
Alberta Oil Sands Technology and Research Authority and Alberta Petroleum Marketing Commission are not included in the Statement of Expenditures.

Note 3 - Statement of Expenditures
Costs of $70 619 ($73 946 in 1984/85) incurred, but not related to the Alberta Petroleum Incentives Program, have been eliminated from the transfer from the General Revenue Fund.

Note 4 - Departmental Change of Name
The Department of Energy and Natural Resources was split into the Departments of Energy and Forestry, Lands and Wildlife on Feb. 6, 1986.

Note 5 - Special Program
Ethane Feedstock Price Equalization Program is administered by the Alberta Petroleum Marketing Commission for Alberta Energy.